

## INTELLIGENT TRANSPORTATION APPLICATION

### General Instructions:

This Excel form is to be used to request federal Congestion Mitigation and Air Quality (CMAQ) funding available through the Maricopa Association of Governments (MAG) for Bicycle Projects to be included in the FY2014-FY 2018 MAG Transportation Improvement Program. Funding is available for Federal Fiscal Year (FFY) 2015, 2016 and 2017.

This application form includes:

- Part A - Contact and Project Description,
- PART B - ITS TIP Listing and CMAQ Score Data,
- PART C - ITS project Description,
- Part D - Checklist and Signature Page, and Transmittal Instructions and Schedule.

Each part is a separate tab of this excel file. Please complete Parts A - D. Alternative application forms are available upon request.

### Deadlines and Transmittal Instructions:

Two copies of a printed, complete and signed application must be received in the MAG offices by **10:00 a.m. Wednesday, September 19, 2012**. The application is to be submitted electronically and should include ArcGIS shape files depicting the project location if they are available.

Detailed transmittal instructions are located in a separate tab in this excel sheet. Late applications **will not be accepted**.

If member agencies need additional information or have questions, they should contact Teri Kennedy or Stephen Tate at (602)

<mailto:state@azmag.gov>

<mailto:tkennedy@azmag.gov>

<mailto:LLuo@azmag.gov>

**All information is required, unless noted by the word - Optional.**

### PART A - CONTACT AND PROJECT DESCRIPTION

#### Contact Information

1. Sponsoring Agency	City of Phoenix
2. Contact Name	Marshall Riegel P.E.
3. Phone	602 534 5351
4. E-Mail Address	marshall.riegel@phoenix.gov
5. Mailing Address	200 W. Washington Street, Phoenix, AZ

(OPTIONAL)

If the applicant will be providing a GIS coverage (shapefile or geodatabase), please see the tab labeled "GIS Transmittal Instructions)

[GIS Submittal Instructions](#)

ITS Application from City of Phoenix for 'HAWK Deployment'

**PART B-ITS TIP Listing and CMAQ Score Data**

This part of the form identifies data to calculate an CMAQ Score and provide the minimum data needed for a listing of the project in the Transportation Improvement Program

**Federal Funding Eligibility**

All ITS projects to be funded with Federal CMAQ funds must be in the 8-Hour Ozone Nonattainment Area. Please use the following link to verify that the map is located in the nonattainment area:

[Link to an 8-Hr Ozone Nonattainment Map on the MAG Website](#)

**1. Traffic Estimate and Roadway Characteristics**

a. Current Average Daily Traffic (ADT) on the Facility or the Nearest Parallel Facility of a Similar Type:

18626

b. Please Describe how the ADT was estimated:

Traffic count performed

c. When was the ADT estimate developed:

7/3/1905

d. Name of the Roadway Section Used for the ADT Estimate:

Approach Volumes at 16th St & Virginia , 7th St & Oak, 3rd St. & Moreland, 25th Ave 1/4 mile north of Dunlap, 19th Ave & Buchanan, Central Ave & Olympic.

e. Starting Limit of the Roadway Section:

NA

f. Ending Limit of the Roadway Section:

NA

g. Length (Miles)

6

h. Total Number of Through Lanes on the Roadway Section:

4

i. Federal Functional Classification of the Roadway Section:

Principal Arterial - Other

[Link to Functional Classification Map on the MAG Website](#)

**2. Traffic Coordination Improvements. If the project improves traffic signal coordination, please do the following:**

a. Enter the pre-improvement (current) traffic speed of the traffic corridor:

35

b. In the Table Check the Box in The Row That Best Describes the Project (Check Only One Box):

	Before (Pre-Improvement) Condition	After (Post Improvement) Condition	Expected Increase In Speed
<input checked="" type="checkbox"/>	Interconnected, pre-timed signals with old timing plan	Advanced computer-based control	17.5 percent
<input type="checkbox"/>	Non-interconnected signals with traffic-actuated controllers	Advanced computer-based control	16.0 percent
<input type="checkbox"/>	Interconnected, pre-timed signals with actively managed timing	Advanced computer-based control	8.0 percent
<input type="checkbox"/>	Interconnected, pre-timed signals with various forms of master control and various qualities of timing plans	Optimization of signal timing plans. No change in hardware	12.0 percent
<input type="checkbox"/>	Non-interconnected, pre-timed signals with old timing plan	Optimization of Signal Timing Plans	7.5 percent

**3. Other Improvements. Check all that apply:**

- ☒ Includes Traffic Signal Improvements for a Single Agency
- ☐ Includes Traffic Signal Improvements that Apply to More than One Agency
- ☐ Includes FMS Improvements



☐ The Project Conforms to Local Land Use Plans

☒ Adds Traffic Signals that increase pedestrian crossing time for seniors

#### 4. Traffic Speed Impacts of the Project (Not required for Traffic Coordination Improvements)

a. Enter the pre-improvement (current) traffic speed of the traffic corridor:

b. Enter the post-improvement (current) traffic speed of the traffic corridor:

ITS Application from City of Phoenix for 'HAWK Deployment'

### PART C -ITS project Description

Please enter project data ONLY in highlighted cells, save the file with the lead agency name in it - ie. City 0 ITS Projects.xls  
Submit this Excel workbook to MAG via email to: [luo@azmag.gov](mailto:luo@azmag.gov)  
Please use one worksheet per project, with the tab at the bottom indicating agency priority -- Mesa1, Mesa2,.. etc.  
Links to various websites are provided for additional information and help  
The worksheet titled "Example" shows an example on how to enter Data in the highlighted areas

Please enter required information in highlighted cells

#### A. Project Title & Sponsor

Lead Agency	City of Phoenix
Other Partnering Agencies	
ITS Project Title:	HAWK Deployment
Project Category:	ITS Applications that Improve Safety

#### B. Project Goals & Objectives

##### Project Goals:

To improve pedestrian safety along signalized coordinated corridors with transit facilities by installing HAWK signals at warranted locations incorporating the HAWK into the signal system to minimize the impact to the progressed movements. This can promote transit use by providing a safe crossing and can minimize impacts (additional congestion and emissions) that would otherwise be introduced by the installation of a full traffic signal that would have a greater impact on the progressed movements.

##### Objectives:

Provide controlled pedestrian crossings of major corridors at appropriate locations with minimal impact to progressed vehicular movements to enhance use of transit.

#### C. Project Information

##### A total of approximately 6 locations.

HAWK signals will be placed at 6 locations throughout Phoenix as specified as follows: 16th St & Virginia, 7th St & Oak, 3rd St. & Moreland, 25th Ave 1/4 mile north of Dunlap, 19th Ave & Buchanan, Central Ave & Olympic.

##### Scope of the project:

Procure, install and provision the HAWK signals at identified locations. Based on the warranted HAWK list, install up to six HAWK signals on signalized, coordinated corridors with existing transit facilities.

#### D. Identify Components in MAG Regional ITS Architecture

<u>ITS applications</u>	<u>Relevant Applications (ENTER: Yes or No)</u>	<u>Applicable ITS Market Packages</u> <a href="http://www.azmag.gov/ITS/">http://www.azmag.gov/ITS/</a>	Note: Please attach the Architecture Flow Diagram in the application
1. Traffic Management	YES	ATMS03	
2. Transit Operations Support	YES	ATMS03	
3. Communications	YES	ATMS03	
4. Traveler Information	NO		
5. Archived Data Management	NO		
6. ITS for Safety	YES	ATMS03	
7. ITS Plans	NO		
8. Freeway-Arterial Operations	NO		

#### E. Program Year Preference

First Choice      ☒ FY2015      ☐ FY2016      ☐ FY2017  
Second Choice      ☐ FY2015      ☒ FY2016      ☐ FY2017  
Third Choice      ☐ FY2015      ☐ FY2016      ☒ FY2017

#### F. Project Budget

	Federal Cost	Local Match (min 5.7%)	Total Cost
Amount	\$839,597.00	\$50,750.00	\$890,347.00
Cost percentage	94.3%	5.7%	

#### G. Project Schedule

The table below is provided as a tool to assist local agencies develop a project planning schedule. Column A shows standard project milestones and Column B shows the schedule based on a typical project procurement process. To generate a custom Project Schedule:(1) select applicable milestones in Column C;(2) Enter estimated time to complete milestone measured in months from project development start date in Column D; **NOTE: The project obligation date generated in cell E111 MUST occur before Sept 15th of the programmed fiscal year.** Determine the appropriate **Project Activity Start Date** (by trial-and-error) in order to obligate the project on time.

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time to Milestone (ENTER #Months)	Estimated Date
Apply for ADOT project number				Dec-2013
Receipt of ADOT project number	Feb-2014			NA
Initial DCR	Mar-2014			NA
Final DCR	Apr-2014			NA
30% Preliminary Plans, Cost Estimate and Report	Jun-2014			NA
60% Preliminary Plans, Cost Estimate and Report	Aug-2014			NA
Final Preliminary Plans, Cost Estimate and Report	Oct-2014			NA
Environmental Clearance	Aug-2014			NA
Utility Clearance	Sep-2014			NA
Right-of-Way Clearance	Jun-2014			NA
Approval of IGA	Dec-2014			NA
Obligation authority of Federal funds	Jan-2015			NA
Advertised Date	Mar-2015			NA
Final Deployment	Sep-2015			NA

< ENTER mm/yyyy -- Project Activity S

#### H. System Maintenance and Operations

Current staff resources available for ITS operations at the local  
Additional staff resources required for fully utilizing features added by  
Estimated current annual ITS operations & maintenance budget  
Estimated additional annual operations & maintenance funds required  
Estimated DATE from when required additional O&M funds will be

7
0.25
\$50,000
\$2,000
Sep-2022

Other comments:

#### I. Systems Engineering Analysis Requirement

Commitment to address the federal requirement for Systems Engineering Analysis:  
Agency's intent to follow the process described in the 'V' diagram  
during the project development process

COP commits to follow the SEA process.

<http://www.azdot.gov/Highways/TTG/PDF/SystemsEngineeringChecklist.pdf>

ITS Application from City of Phoenix for 'HAWK Deployment'



## MAG CMAQ Project

### Intelligent Transportation Systems Project

Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
------------------	------	--------	-------------	-------	--------------------

#### A. SCOPING (15% Preliminary Engineering Design) (Non-infrastructure projects: Only #2 applies).

1. SITE TOPOGRAPHIC SURVEY	LS	0	\$50,000.00	\$0.00	No
2. PROJECT ASSESSMENT REPORT or DETAILED WORKPLAN	LS	1	\$5,000.00	\$5,000.00	No
3. SYSTEMS ENGINEERING ANALYSIS (must address FHWA requirements)	LS	1	\$8,000.00	\$8,000.00	No
4. ENVIRONMENTAL DETERMINATION (Infrastructure projects, including technical supporting documents)	LS	1	\$20,000.00	\$20,000.00	No
5. HAZMAT ASSESSMENT	LS	1		\$0.00	No
<b>SUBTOTAL – PROJECT SCOPING COSTS</b>				<b>\$33,000.00</b>	<b>\$0</b>

#### B. FINAL PRELIMINARY ENGINEERING DESIGN - Stages II, III, IV and PS&E (Not applicable to non-infrastructure projects)

Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
1. Right-of-Way Acquisition	LS	0		\$0.00	No
2. Plans, Special Provisions or Bid Manual, Cost Estimate & Schedules.	LS	1	\$75,000.00	\$75,000.00	No
3. GEOTECHNICAL INVESTIGATION and Materials & Pavement Design Report	LS	0		\$0.00	No
4. DRAINAGE REPORT	LS	0		\$0.00	No
5. Storm Water Pollution Prevention Plan (SWPPP)	LS	0		\$0.00	No
<b>SUBTOTAL – PROJECT DESIGN COSTS</b>				<b>\$75,000.00</b>	<b>\$0</b>

#### C. CONSTRUCTION OR IMPLEMENTATION

For non-infrastructure projects (no ground disturbing activities), address only parts 2, 3 and D.

1. CONSTRUCTION ELEMENTS (Insert additional rows if necessary)



Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
Structure for HAWK Signal	EA	6	25000	\$150,000	Yes
Signal Head Assembly	EA	6	9000	\$54,000	Yes
Conduit	LF	6	16500	\$99,000	Yes
Power Pedestal for HAWK	EA	8	8000	\$64,000	Yes
Conductors	LF	1,800	2.5	\$4,500	Yes
Controller	EA	6	26000	\$156,000	Yes
Interconnect Communication	EA	6	6000	\$36,000	Yes
Interconnect Communication Cable	LF	1,800	2	\$3,600	Yes
				\$0	No
				\$0	No
				\$0	No
				\$0	No
				\$0	No
				\$0	No
				\$0	No
				\$0	No
				\$0	No
				\$0	No
				\$0	No
				\$0	No
				\$0	No
SUBTOTAL - CONSTRUCTION				\$567,100	\$567,100

**2. PROCUREMENT** (Insert additional rows if necessary)

Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
Example: ATMS Server Software	LS			\$0	No
Example: TMC Workstations	LS			\$0	No
Example: VIDS, 3 approaches	EA			\$0	Yes
Example: VIDS, 4 approaches	EA			\$0	Yes
Example: CCTV (IP w/ pan/zoom/tilt)	EA			\$0	Yes
				\$0	No
				\$0	No
				\$0	No
				\$0	No
				\$0	No
				\$0	No
				\$0	No
				\$0	No
				\$0	No
				\$0	No
				\$0	No
				\$0	No
<b>SUBTOTAL – PROCURMENT</b>				<b>\$0</b>	<b>\$0</b>

### 3. OTHER ITEMS



Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
				\$0.00	No
				\$0.00	No
				\$0.00	No
				\$0.00	No
				\$0.00	No
				\$0.00	No
				\$0.00	No
				\$0.00	No
				\$0.00	No
				\$0.00	No
				\$0.00	No
				\$0.00	No
				\$0.00	No
				\$0.00	No
				\$0.00	No
				\$0.00	No
<b>SUBTOTAL - OTHER CONSTRUCTION LINE ITEMS</b>				\$0.00	\$0
<b>4. MOBILIZATION AND ADMINISTRATION COSTS (Construction Only. If Section 1 is filled out, please fill out this section)</b>					
Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
CONTRACTOR MOBILIZATION	LS	1	\$68,052.00	\$68,052.00	Yes
TRAFFIC CONTROL	LS	1	\$56,710.00	\$56,710.00	Yes
CONSTRUCTION SURVEY & LAYOUT	LS	0		\$0.00	No
CONSTRUCTION CONTINGENCIES	LS	1	\$113,420.00	\$113,420.00	Yes
CONSTRUCTION ADMINISTRATION	LS	1	\$85,065.00	\$85,065.00	Yes
<b>SUBTOTAL – MOBILIZATION &amp; ADMINISTRATION COSTS</b>				\$ 323,247	\$323,247
<b>TOTAL CONSTRUCTION OR IMPLEMENTATION COST</b>				\$ 890,347	\$ 890,347
<b>D. ADOT Fee for PE Reviews and Staff Charges</b>	LS	1	\$5,000	\$5,000	No
<b>TOTAL ADOT Fee COST</b>				\$5,000	\$0

Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
<b>E. TOTAL PROJECT COST</b> (All <u>subtotals</u> + ADOT local projects review fee)				\$1,003,347	\$890,347
<b>F. SUMMARY OF FEDERAL AND NON-FEDERAL FUNDS</b>					
TOTAL COST FOR PROJECT CONSTRUCTION/IMPLEMENTATION					\$1,003,347
TOTAL COST FOR PROJECT ELIGIBLE FOR FEDERAL REIMBURSEMENT					\$890,347
TOTAL FEDERAL FUNDS @ 94.3% (.943 x Total Eligible Cost shown highlighted above)					\$839,597
LOCAL AGENCY MATCHING FUNDS (.057 x Total Cost shown highlighted above)					\$50,750
LOCAL AGENCY FUNDS <u>NOT</u> ELIGIBLE FOR FEDERAL REIMBURSEMENT					\$113,000



**PART D - SIGNATURE AND CHECKLIST**

As the jurisdiction's manager/administrator or designated representative, I certify that this application is accurate and complete and that the project will be included in the sponsoring MAG member agency's local CIP/TIP if the project is selected for federal funding.

Signature:

*R. Naimark*

Name: Rick Naimark

Title: Deputy City Manager

Date: September 18, 2012

**WILL FILL OUT AFTER QUESTIONS APPROVED.****Checklist - OPTIONAL**

This check list is optional, but is included to facilitate applicant review and verification that all required fields in the form have been completed.

**PART A - Contacts and Project Description Fields**

Complete?

Contact Information, fields 1 – 5 are complete

**PART B - TIP Listing and CMAQ Score Data**

Complete?

1. Traffic Estimate and Roadway Characteristics - Fields a - I are complete

2. Traffic Coordination Improvements - as applicable table is complete

3. Other Improvements - As applicable all fields are completed

**PART C - Total Project Schedule and Budget Including All Segment Fields**

Complete?

Section A is Complete

Section B is Complete

Section C is Complete

Section D is Complete

Section E is Complete

Section F is Complete

Section G is Complete

Section H is Complete

Section I is Complete

**PART D - Signature Page Fields**

Complete?

Form is signed





Name, title and date fields are completed.

ITS Application from City of Phoenix for 'HAWK Deployment'

# City of Phoenix Street Transportation

## HAWKs

### Legend

-  Hawk Locations
-  Major Streets
-  Freeways
-  City Limit

